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<p>99-107189/10 A96 D21 (A14) BADI 97.07.24 BASF AG *DE 19731907-A1 97.07.24 97DE-1031907 (99.01.28) A61K 7/11, C08F 226/06 Polymer used as conditioning and hair-fixing gel former - is quaternised or protonised copolymer of optionally quaternised N- vinyl-imidazole, bi- or poly-functional comonomer and optionally other comonomer C99-032186 Addnl. Data: ZEITZ K, HOESSEL P, DIEING R, SANNER A</p>	<p>A(12-V4A) D(8-B3, 8-B5)</p> <p>25</p>
<p>Polymers (I) used as conditioning and hair-fixing gel formers in cosmetic formulations are obtained by (i) free radical-initiated copolymerisation of monomer mixtures of: (a) 1-99.9 wt.% optionally quaternised N-vinylimidazole, (b) 0-98.99 wt.% neutral or basic water- soluble monomer, (c) 0-49.99 wt.% unsaturated acid or anhydride, (d) 0-50 wt.% other comonomer and (e) 0.01-10 wt.% bi- or poly- functional comonomer, followed by (ii) quaternisation or protonisation of (I) is monomer (a) is not quaternised. Also claimed are hair cosmetics and hair gels containing (I).</p> <p><u>USE</u> The formulations are especially useful as hair gels, styling gels and wet-look gels.</p>	<p><u>ADVANTAGE</u> (I) have very good conditioning and fixing properties and cationic gels based on (I) have such a good conditioning action that no other conditioner need be added, although other cationic conditioners can be added, as they are compatible with (I).</p> <p><u>PREFERRED COPOLYMER</u> Monomer (b) is vinyl lactam, especially in amounts of 30-70 wt.%. Protonisation is carried out in the cosmetic formulation.</p> <p><u>EXAMPLE</u> A mixture of 560 g water, 320 g vinylpyrrolidone, 160 g vinylimidazolium methosulphate, 0.625 g 2,2'-azobis(2- amidinopropane) dihydrochloride and 1.2 g tripropylene glycol diacrylate was purged with nitrogen in a kneader, then heated to 70°C. Polymerisation stopped after 1 hour. More initiator was added and polymerisation was continued for 6 hours at 70°C, then the polymer was discharged, dried and pulverised. Gel (A) contained 1.5% DE 19731907-A+</p>

<p>polymer in water and neutralizing agent as necessary. A control (B) contained 0.5% 'Carbomer' (RTM). The gels had a viscosity of (A) 26000, (B) 15000 mPa.s. When applied to hair, the reduction in combing force was (A) 65, (B) 0%; fixing and effect (A) very good, (B) slight. Both gels looked clear and smooth. (6pp(0)16DwgNo.0/0)</p>	<p>DE 19731907-A</p>
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